Kuhn et al. Ser. No.10/074,203 G.A.U. 3616

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in this application.

1. (presently amended) A wheeled motor vehicle ~~comprising~~ that is propelled by a motor and comprises:

an ignition switch that can be turned on and off for turning the motor ~~of the vehicle~~ on and off;

an auxiliary lift axle that comprises wheels, that can be raised to lift the wheels of the lift axle off an underlying surface on which the vehicle is supported, and that can be lowered to place the wheels of the lift axle on the underlying surface; and

a control for raising and lowering the lift axle comprising a circuit that is fed through the ignition switch when the ignition switch is on but not when the ignition switch is off and that comprises a first switch device that requires actuation to enable the lift axle to be lowered and a second switch device that, once the first switch device has been actuated to enable the lift axle to be lowered, is effective upon being actuated to cause the lift axle to be lowered.

2. (original) A motor vehicle as set forth in Claim 1 wherein the first switch device comprises a relay having a normally open contact that is sealed closed upon the relay being energized by operation of an actuating switch for the relay.

3. (original) A motor vehicle as set forth in Claim 2 wherein the second switch device comprises a raise-lower switch that, when the relay contact has been sealed closed, is selectively operable to a lower position for causing the lift axle to be lowered and to a raise position for causing the lift axle to be raised.

4. (original) A motor vehicle as set forth in Claim 3 wherein the relay contact and raise-lower switch form a series circuit between the ignition switch and an electric control device for a raise-lower mechanism that raises and lowers the lift axle, and when complete, the series circuit causes voltage to be applied to the control device for causing the control device to lower the lift axle via the raise-lower mechanism.

5. (original) A motor vehicle as set forth in Claim 4 wherein the raise-lower mechanism comprises a pneumatic device that is inflated to raise the lift axle.

6. (original) A motor vehicle as set forth in Claim 5 wherein the pneumatic device that is inflated to raise the lift axle comprises lift air springs proximate opposite ends of the lift axle.

7. (original) A motor vehicle as set forth in Claim 5 including load air springs for the axle that are being deflated while the pneumatic device is being inflated.

8. (original) A motor vehicle as set forth in Claim 4 wherein the electric control device for the raise-lower mechanism comprises a solenoid-operated valve.

9. (original) A motor vehicle as set forth in Claim 1 including a transmission for selectively placing the vehicle in a forward drive gear and a reverse drive gear, and wherein, with the lift axle having been lowered, placement of the transmission in reverse drive gear causes the control to raise the lift axle.

10. (original) A motor vehicle as set forth in Claim 9 wherein the first switch device comprises an enable relay having a normally open contact that is sealed closed upon the relay being energized by operation of an actuating switch for the relay, the control further comprises a reverse gear relay having a contact that is connected in series with the contact of the enable relay and that is normally closed as long as the transmission is not in a reverse drive gear, the second switch device comprises a raise-lower switch that, when the contact of the reverse gear relay is closed and the enable relay has been sealed closed, is selectively operable to a lower position for causing the lift axle to be lowered and to a raise position for causing the lift axle to be raised, but whenever the transmission is placed in a reverse drive gear while the lift axle is lowered, the contact of the reverse gear relay opens to cause the control to raise the lift axle.

11. (presently amended) A control for raising and lowering a lift axle on a motor vehicle having ~~any~~ an ignition switch that can be turned on and off for turning ~~the~~ a motor that propels the vehicle on and off, the control comprising:

a circuit that is fed through the ignition switch when the ignition switch is on but not when the ignition switch is off and that comprises a first switch device that requires actuation to enable the lift axle to be lowered and a second switch device that, once the first switch device has been actuated to enable the lift axle to be lowered, is effective upon being actuated to cause the lift axle to be lowered..

12. (original) A control as set forth in Claim 11 wherein the first switch device comprises a relay having a normally open contact that is sealed closed upon the relay being energized by operation of an actuating switch for the relay.

13. (original) A control as set forth in Claim 12 wherein the second switch device comprises a lift-lower switch that, when the relay contact has been sealed closed, is selectively operable to a first position for causing the lift axle to be lowered and to a second position for causing the lift axle to be raised.

14. (original) A control as set forth in Claim 13 wherein the relay contact and lift-lower switch form a series circuit between the ignition switch and an electric control device for a lift-lower mechanism that raises and lowers the lift axle, and when complete, the series circuit causes voltage to be applied to the control device for causing the control device to lower the lift axle via the lift-lower mechanism.

15. (original) A control as set forth in Claim 11 including a third switch device that changes from one switch state to another switch state in response to occurrence of a signal indicating that a transmission of vehicle has been shifted into a reverse drive gear for causing the lift axle, if lowered, to be raised.

16. (original) A control as set forth in Claim 15 wherein the first switch device comprises an enable relay having a normally open contact that is sealed closed upon the relay being energized by operation of an actuating switch for the relay, the third switch device comprises a reverse gear relay having a contact that is connected in series with the contact of the enable relay and that is normally closed as long as the transmission is not in a reverse drive gear, the second switch device comprises a raise-lower switch that, when the contact of the reverse gear relay is closed and the enable relay has been sealed closed, is selectively operable to a lower position for causing the lift axle to be lowered and to a raise position for causing the lift axle to be raised, but whenever the signal indicating that the transmission has been shifted into a reverse drive gear occurs while the lift axle is lowered, the contact of the reverse gear relay opens for causing the lift axle to be raised.